Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A ~~data~~ payload data unit switching engine of a payload data unit switching node, ~~having a~~ the switching engine comprising:

a. a ~~data~~ payload data unit traffic management database,

b. a ~~data~~ payload data unit traffic management processor performing intensive traffic management computations in ensuring guaranteed levels of service and updating the ~~data~~ payload data unit traffic management database ~~in performing data traffic management~~, and

c. a ~~data~~ payload data unit switching processor switching ~~data~~ payload data unit traffic based ~~on routing entries in a~~ switching database entries subject to ~~data~~ payload data unit traffic shaping criteria held in the traffic management database.

~~whereby the data traffic management processor relieves the data switching processor of intensive traffic management computations in providing guaranteed levels of service.~~

2. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 1, wherein the ~~data~~ payload data unit traffic management database stores resource utilization information, the resource utilization information specifying a current state of the ~~data~~ payload data unit traffic conveyed by the ~~data~~ payload data unit switching node.

3. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 2, wherein the resource utilization information is stored in a bit encoded form.

4. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 1, wherein the ~~data~~ payload data unit traffic shaping criteria includes ~~data~~

payload data unit traffic shaping heuristics enabling the ~~data~~ payload data unit switching processor to enforce service level guarantee ~~data~~ payload data unit traffic constraints on ~~data~~ payload data unit traffic flows processed by the ~~data~~ payload data unit switching node.

5. (Canceled)

6. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 1, wherein the ~~data~~ payload data unit switching node further comprises information exchange means enabling communication between the ~~data~~ payload data unit switching processor and the ~~data~~ payload data unit traffic management processor.

7. (Canceled)

8. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim ~~7~~ 6, wherein the information exchange means includes a ~~communications protocol further provides~~ notification to the ~~data~~ payload data unit switching processor upon updating the ~~data~~ payload data unit traffic management database.

9. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 6, wherein the information exchange means includes a working store.

10. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 9, wherein the working store comprises multi-ported random access memory enabling concurrent access thereto by the ~~data~~ payload data unit switching processor and the ~~data~~ payload data unit traffic management processor.

11. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 9, wherein the ~~data~~ payload data unit traffic management processor includes the working store.

12. (Canceled)

13. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 6, wherein the information exchange means includes data registers internally associated with the ~~data~~ payload data unit switching processor, the data registers storing at least a portion of the ~~data~~ payload data unit traffic management database.

14. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 13, wherein the data registers comprise multi-ported random access memory enabling concurrent access thereto by the ~~data~~ payload data unit switching processor and the ~~data~~ payload data unit traffic management processor.

15. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 13, wherein the information exchange means includes a communications protocol, the communications protocol including direct memory writes to the data registers on updating the ~~data~~ payload data unit traffic management database.

16. (Canceled)

17. (Currently Amended) ~~A data~~ The payload data unit switching engine ~~node as~~ claimed in claim 6, wherein the information exchange means further comprises at least one dedicated data bus for communication between the ~~data~~ payload data unit switching processor and the ~~data~~ payload data unit traffic management processor.

18. (Original) A method of enforcing service level agreements for data traffic flows conveyed by a multiport data switching node, the method comprising steps of:

a. extracting header information from a payload data unit (PDU) received by a switching processor from an input port of the data switching node;

b. querying a switching database to determine an output port to forward the PDU;

c. querying a data traffic management database maintained by a data traffic management processor, the data traffic management database storing data traffic management information;

d. processing the PDU subject to data traffic constraints and current states of the data traffic flows included in the data traffic management information;

e. selectively providing feedback information to the data traffic management processor regarding actions taken by the switching processor in processing the PDU; and

f. updating the data traffic management database upon computing a current state of the data traffic flows based on the provided feedback information whereby the switching processor is relived of intensive data traffic management computations.

19. (Original) A method as claimed in claim 18, wherein processing the PDU the method further comprises a step of processing the PDU subject to data traffic shaping heuristics providing data traffic flow control for the input port.

20. (Original) A method as claimed in claim 18, wherein processing the PDU the method further comprises a step of processing the PDU subject to data traffic shaping heuristics providing data traffic flow control for the output port.

21. (Original) A method as claimed in claim 18, wherein computing the current state of the data traffic flows the method further comprises the step of querying a service level agreement database associated with the traffic management processor to determine service level guarantees.

22. (Original) A method as claimed in claim 18, wherein processing the PDU the method further comprises a step of processing the PDU subject to data traffic shaping heuristics providing data traffic flow control for the output port.